

INTERNATIONAL SEARCH REPORT

C16

International Application No
PCT/US 98/23558

A. CLASSIFICATION OF SUBJECT MATTER IPC 7 H04H1/00		
According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) IPC 7 H04H		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched		
Electronic data base consulted during the international search (name of data base and, where practical, search terms used)		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 4 972 471 A (DALE JAMES ET AL) 20 November 1990 (1990-11-20) column 1, line 1 - column 2, line 26; claim 1; figure 1 ---	1, 14, 27, 33, 39, 46, 53, 59, 76
A	GB 2 260 246 A (ARBITRON COMPANY THE) 7 April 1993 (1993-04-07) page 1, line 1 - page 5, line 12; claims 1, 12; figures 1, 3 --- -/--	1, 14, 27, 33, 39, 46, 53, 59, 76
<input checked="" type="checkbox"/> Further documents are listed in the continuation of box C.		
<input checked="" type="checkbox"/> Patent family members are listed in annex.		
* Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier document but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art "3" document member of the same patent family		
Date of the actual completion of the international search 23 August 1999		Date of mailing of the international search report 27. 08. 1999
Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016		Authorized officer De Haan, A.J.

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International Application No

PCT/US 98/23558

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	GB 2 292 506 A (ARBITRON COMPANY THE) 21 February 1996 (1996-02-21) page 1, line 1 - page 7, line 29; claims 1,12,15; figures 1,3 ---	1,14,27, 33,39, 46,53, 59,76
A	GB 2 170 080 A (NIPPON ELECTRIC CO) 23 July 1986 (1986-07-23) page 1, line 1 - page 2, line 6; claim 1 ---	65
A	PATENT ABSTRACTS OF JAPAN vol. 097, no. 005, 30 May 1997 (1997-05-30) & JP 09 009213 A (NEC ENG LTD), 10 January 1997 (1997-01-10) abstract ---	65
A	PATENT ABSTRACTS OF JAPAN vol. 095, no. 006, 31 July 1995 (1995-07-31) & JP 07 059030 A (SONY CORP), 3 March 1995 (1995-03-03) abstract ---	65
A	EP 0 243 561 A (IBM) 4 November 1987 (1987-11-04) page 2, line 1 - page 3, line 5; claim 1 ---	70
A	DE 43 16 297 C (FRAUNHOFER GES FORSCHUNG) 7 April 1994 (1994-04-07) page 2, line 1 - page 3, line 16; claim 1 ---	70
A	EP 0 535 893 A (SONY CORP) 7 April 1993 (1993-04-07) page 2, line 1 - page 5, line 58; claim 1 ---	70
A	WO 89 09985 A (MASSACHUSETTS INST TECHNOLOGY) 19 October 1989 (1989-10-19) page 1, line 1 - page 9, line 21; claims 1,9-11 -----	70

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 98/23558

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 4972471 A	20-11-1990	CA 2088780 A WO 9205550 A EP 0548071 A	15-03-1992 02-04-1992 30-06-1993
GB 2260246 A	07-04-1993	FR 2681997 A AT 174737 T AU 668888 B AU 2668692 A DE 69227916 D DE 69227916 T EP 0606341 A EP 0872971 A ES 2125907 T GB 2292506 A, B HK 1007850 A MX 9205506 A WO 9307689 A US 5574962 A US 5581800 A US 5787334 A ZA 9207317 A	02-04-1993 15-01-1999 23-05-1996 03-05-1993 28-01-1999 27-05-1999 20-07-1994 21-10-1998 16-03-1999 21-02-1996 23-04-1999 01-07-1993 15-04-1993 12-11-1996 03-12-1996 28-07-1998 24-03-1994
GB 2292506 A	21-02-1996	FR 2681997 A AT 174737 T AU 668888 B AU 2668692 A DE 69227916 D DE 69227916 T EP 0606341 A EP 0872971 A ES 2125907 T GB 2260246 A, B HK 1007850 A MX 9205506 A WO 9307689 A US 5574962 A US 5581800 A US 5787334 A ZA 9207317 A	02-04-1993 15-01-1999 23-05-1996 03-05-1993 28-01-1999 27-05-1999 20-07-1994 21-10-1998 16-03-1999 07-04-1993 23-04-1999 01-07-1993 15-04-1993 12-11-1996 03-12-1996 28-07-1998 24-03-1994
GB 2170080 A	23-07-1986	JP 1785255 C JP 4071394 B JP 61169088 A CA 1236562 A US 4618890 A	31-08-1993 13-11-1992 30-07-1986 10-05-1988 21-10-1986
JP 09009213 A	10-01-1997	NONE	
JP 07059030 A	03-03-1995	NONE	
EP 0243561 A	04-11-1987	CA 1284679 A JP 1896687 C JP 6024398 B JP 62261255 A US 4782523 A	04-06-1991 23-01-1995 30-03-1994 13-11-1987 01-11-1988
DE 4316297 C	07-04-1994	DE 59408457 D EP 0624866 A	12-08-1999 17-11-1994

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 98/23558

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
DE 4316297 C		US 5583784 A	10-12-1996
EP 0535893 A	07-04-1993	JP 5183442 A	23-07-1993
		US 5349549 A	20-09-1994
WO 8909985 A	19-10-1989	US 4937873 A	26-06-1990
		AU 3736289 A	03-11-1989
		CA 1337665 A	28-11-1995